

IN THE CLAIMS

Please replace any previous listing of the claims with the following replacement listing of the claims:

Replacement Listing of the Claims

1 and 2. (Canceled)

3. (Currently amended) The method of claim 26, wherein said data structure further comprises a time stamp, wherein at least one of said classified attribute types is a start time another storage volume of said database is organized for a first one of said identified events, and wherein at least one of said other storage volumes is accessed according to said start time type stamp for storage and retrieval of values of said attributes corresponding to at least one of said events and/or activities said first event.

4. (Previously presented) The method of claim 26, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein at least one storage volume of said database is allocated to all of said common attributes.

5. (Previously presented) The method of claim 26, further comprising compressing said output data which is stored in a first one of said storage volumes according to identity of values of said output data of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

6. (Previously presented) The method of claim 5, wherein said data structure further comprises a time stamp, and wherein said first one of said storage

volumes is accessed according to said time stamp for storage and/or retrieval of said values of said output data, and wherein said values of said output data of a first event are retrieved from said first storage volume by using a value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

7. (Currently amended) The method of claim 26, wherein a value of an attribute type that is always the same for a specific one of said event or activity types is classified as static, said attributes of at least one defined attribute type corresponding to a first one of said storage volumes are static, and further comprising optimizing data storage in said first-one of said storage volumes by omitting storage of a-said static value.

8. (Previously presented) The method of claim 26, wherein said industrial process is one of a plurality of industrial processes, and wherein said program operates said computer for each of said plurality of industrial processes using said data structure.

9. (Previously presented) The method of claim 8, wherein at least two of said plurality of industrial processes are different from one another.

10. (Previously presented) The method of claim 26, further comprising presenting data values of different ones of said events and/or activities that are defined as different event and/or activity types in any one of a plurality of formats to said client device.

11. (Original) The method of claim 10, wherein said plurality of formats are selected from the group consisting of: row format, column format and chart format.

12. (Previously presented) The method of claim 26, further comprising developing a map structure for mapping diverse external names of said attributes and/or field contents thereof to a common internal attribute name and/or field content.

13 and 14. (Canceled)

15. (Currently amended) The computer system of claim 27, wherein ~~said data structure further comprises a time stamp, wherein at least one of said classified attribute types is a start time~~ ~~another storage volume of said database is organized for a first one of said identified events, and wherein said other at least one of said volumes~~ is accessed according to ~~said start time type stamp for storage and retrieval of values~~ of said attributes corresponding to ~~said first at least one of said events and/or activities~~.

16. (Previously presented) The computer system of claim 27, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein at least one storage volume of said database is allocated to all of said common attributes.

17. (Previously presented) The computer system of claim 27, further comprising compressing said output data which is stored in a first one of said storage volumes according to identity of values of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

18. (Previously presented) The computer system of claim 17, wherein said data structure further comprises a time stamp, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values, and wherein said values of a first event are retrieved from said first storage volume by using the value of a first time stamp for said first

event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

19. (Currently amended) The computer system of claim 27, wherein a value of an attribute type that is always the same for a specific one of said event or activity types is classified as static ~~said attributes of at least one defined attribute type corresponding to a first one of said storage volumes are static~~, and further comprising optimizing data storage in said first one of said storage volumes by omitting storage of a-said static value.

20. (Previously presented) The computer system of claim 27, wherein said industrial process is one of a plurality of industrial processes, and wherein each of said plurality of industrial processes is classified for defined event and/or activity types and defined attribute types using said data structure.

21. (Previously presented) The computer system of claim 20, wherein at least two of said plurality of industrial processes are different from one another.

22. (Previously presented) The computer system of claim 27, wherein said program further presents data values of different ones of said event and/or activities that are defined as different event and/or activity types in any one of a plurality of formats to said client device.

23. (Original) The computer system of claim 22, wherein said plurality of formats is selected from the group consisting of: row format, column format and chart format.

24. (Previously presented) The computer system of claim 27, wherein said program further develops a map structure for mapping diverse external names of attributes and/or field contents thereof to a common internal attribute name and/or field content.

25. (Canceled)

26. (Currently amended) A method for using a computer to define, store and retrieve output data of an industrial process, said method comprising:

collecting with a monitor said output data of said industrial process and providing said output data to said computer;

operating said computer with a program

(a) ~~in response to input data entered by a user to identify, in response to input data entered by a user, one or more events and/or activities of said industrial process and one or more attributes thereof of said events and/or said activities of said industrial process;~~

(b) to classify said identified events, activities and attributes that are identified by step (a) according to a data structure that comprises at least one event type or at least one activity type and a plurality of attribute types;

(c) to organize separate storage volumes of said database for said classified attribute types;

(d) to use said data structure in a manner that permits access ~~of to~~ said database by said identified activities, events and attributes thereof that are identified by step (a) to store said output data in said storage volumes according to said data structure and in response to a request to retrieve from at least one of said storage volumes that output data that corresponds to at least one of said identified activities, events or attributes that is included in said request; and

(e) to provide said retrieved output data to a client device.

27. (Currently amended) A computer system that defines, stores and retrieves the output data of an industrial process comprising:

a computer, a database, a client device and a monitor that collects said output data of said industrial process and provides said output data to said computer, wherein said computer comprises a program that when executed on said computer performs the steps comprising:

(a) identifying in response to input data entered by a user, to identify one or more events and/or activities of said industrial process and one or more attributes thereof of said events and activities of said industrial process;

(b) classifying to classify said identified events, activities and attributes that are identified by step (a) according to a data structure that comprises at least one event type or at least one activity type and a plurality of attribute types;

(c) organizing to organize separate storage volumes of said database for said classified attribute types;

(d) using to use said data structure in a manner that permits access of to said database by said identified activities, events and attributes thereof that are identified by step (a) to store said output data in said storage volumes according to said data structure and in response to a request to retrieve from at least one of said storage volumes that output data that corresponds to at least one of said identified activities, events or attributes that is included in said request; and

(e) ~~to provide~~providing said retrieved output data to a client device.
~~of said database by said identified activities, events and attributes thereof.~~

28. (Currently amended) A memory media having stored thereon a computer readable program for controlling a computer that defines, stores and retrieves output data of an industrial process, wherein said computer readable program comprises:

(a) one or more first program instructions that control said computer in response to input data entered by a user to identify, in response to input data entered by a user one or more events and/or activities of said industrial process and one or more attributes of said events and/or activities thereof of said industrial process;

(b) one or more second program instructions that control said computer to classify said identified events, activities and attributes that are identified by said computer per the first program instructions according to a data structure that comprises at least one event type or at least one activity type and a plurality of attribute types;

(c) one or more third program instructions that control said computer to organize separate storage volumes of a database for said classified attribute types;

(d) one or more fourth program instructions that control said computer to use said data structure in a manner that permits access of to said database by said identified activities, events and attributes thereof that are identified by computer per the first program instructions to store said output data in said storage volumes according to said data structure and in response to a request to retrieve from at least one of said storage

volumes that output data that corresponds to at least one of said identified activities, events or attributes that is included in said request; and

(e) one or more fifth program instructions that control said computer to provide said retrieved output data to a client device.

29. (New) The memory media of claim 28, wherein an output of said industrial process is a time varying signal, and wherein said monitor comprises at least one sensor that receives said time varying signal and provides it to said computer as at least a portion of said output data.

30. (New) The method of claim 26, wherein an output of said industrial process is a time varying signal, and wherein said monitor comprises at least one sensor that receives said time varying signal and provides it to said computer as at least a portion of said output data.

31. (New) The computer system of claim 27, wherein an output of said industrial process is a time varying signal, and wherein said monitor comprises at least one sensor that receives said time varying signal and provides it to said computer as at least a portion of said output data.